

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/FI2004/000250

International filing date (day/month/year)
22.04.2004

Priority date (day/month/year)
22.04.2003

International Patent Classification (IPC) or both national classification and IPC
A23L1/30, A23L2/52, A23L2/60, A23L2/02, A23C9/152, A23C9/13

Applicant
RAISIO BENECOL OY

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

22.04

3. For further details, see notes to Form PCT/ISA/220.

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10/553760

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/FI2004/000250

~~JO20 Recd PCT/ST/PTO~~ 20 OCT 2005

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/FI2004/000250

Box No. II Priority

1. ☒ The following document has not been furnished:

- ☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).
- ☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	11,34
	No: Claims	1-10, 12-33
Inventive step (IS)	Yes: Claims	34
	No: Claims	1-33
Industrial applicability (IA)	Yes: Claims	1-34
	No: Claims	

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/FI2004/000250

JC20 Rec'd PCT/PTO 20 OCT 2005

ITEM V

1. The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

- D1: WO 01/54686 A (NIEHOFF RAYMOND LOUIS ; PROCTER & GAMBLE (US); SARAMA ROBERT JOSEPH (U) 2 August 2001 (2001-08-02)
- D2: WO 02/082929 A (RAISIO BENECOL OY ; HOPIA ANU (FI); PALMU TAPIO (FI); POURU ANNIINA (F) 24 October 2002 (2002-10-24)
- D3: WO 02/28204 A (KIM BO CHUN ; KIM KAB SIG (KR); HAN JUNG HEE (KR); HONG HYUNG PYO (KR)) 11 April 2002 (2002-04-11)

2. NOVELTY OBJECTIONS

D1 describes an healthy food product containing sterols to reduce the bitter flavor. There is also a sweetener composition (carbohydrate or non-carbohydrate). The amount of the sweetener may be reduced by another component (page 28 paragraph 1). Use in foodstuff and beverages (low viscosity food) is also claimed (milk, fermented milk, yoghurt-like products, juices, ice-cream, cereal based) (claim 4, page 2 paragraphs 2,3, page 20 paragraph 6- page 22 paragraph 1, page 25 paragraphs 2, page 27 paragraphs 2,4- page 29 paragraph 1). Consequently, the subject matter of claims 1-9, 19-25, 29-33 is considered as being not new in view of D1 (Art 33 (2) PCT).

D2 describes an healthy food or beverage product containing sterols. There is also a sweetener composition (carbohydrate). The strong taste of B-glucan is weakened (page 11 line 26-28). Use in foodstuff and beverages (low viscosity food) is also claimed (milk, juices, cafe, tea, ice cream) (claims 8,12,13,18, examples 1-13, page 5 line 31- page 6 line 21, page 11 lines 18-28). Consequently, the subject matter of claims 1,3,4,7-10,19-29 is considered as being not new in view of D2 (Art 33 (2) PCT).

D3 describes an healthy beverage product containing sterols. There is also a sweetener composition (carbohydrate). The composition has no influence of the taste of the end product. Use in foodstuff and beverages (low viscosity food) is also claimed (milk, juices, cafe, tea, soy milk) (claim 18, examples 6,8, page 9 lines 30-33, page 26 lines 5-10). Consequently, the subject matter of claims 10,12-23 is considered as being not new in view of D3 (Art 33 (2) PCT).

3. INVENTIVE STEP OBJECTIONS

In claim 11 a milk based cocoa drink with sterol ester and carbohydrate sweetening agent is defined. D1-D3 define the use of sterol (ester) and carbohydrate sweetening agent in wide range of beverages. This modification (cocoa drink) is regarded as such a small change to beverages described in D1-D3 and comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject matter of claim 11 is considered as being not inventive in view of D1-D3 (Art 33(3) PCT).

None of the claimed 1-33 compositions, products or methods are considered to be inventive in view of D1-D3 (Art 33(3) PCT). Having regard to the claimed 1-33 compositions, products or methods and the prior art known (D1-D3), it is considered that the man skilled in the art would regard these compositions, products or methods of the present invention (as far as novel) as an obvious alternative to those known. Therefore, unless an unexpected effect for the present compositions, products or methods (as far as novel) over the prior art disclosure from D1-D3 can be demonstrated, these compositions, products or methods in claims 1-33 do not fulfill the requirements of Art 33(3) PCT.

4. NOVEL AND INVENTIVE CLAIM

There is no document cited in the search report to use sterol esters in an edible product for replacing part of a sweetening agent. The closest prior art (D1) teaches the use of sterols to reduce bitter taste. However, there is no hint given specifically to reduce the amount of the sweetener by sterols and simultaneously mask bitter, sour and astringent taste. This does not come within the scope of the customary practice followed by persons skilled in the art. Consequently, the subject-matter of claim 34 is found novel and inventive (Art 33(2) and (3) PCT).